

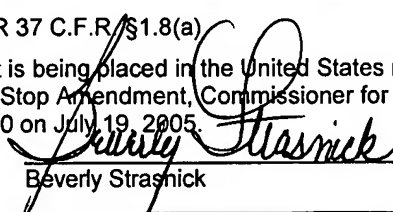
**INFORMATION DISCLOSURE TRANSMITTAL**

Docket No. F0017/7001

Applicant: Jiankang Huang, Robert C. O'Handley and David Bono  
Serial No: 10/767,800  
Filed: January 29, 2004  
For: HIGH EFFICIENCY VIBRATION ENERGY HARVESTER  
Examiner: Not Yet Assigned  
Art Unit: 3671

**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 19, 2005.

  
Beverly Strashnick

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In keeping with the duty of candor and good faith owed to the Patent and Trademark Office, Applicant wishes to bring information to the attention of the Examiner. The filing of this statement shall not be construed as a representation that a search has been made or as an admission that this information is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

**Enclosures**

- ☒ A form PTO-1449 listing this information is attached  
☒ A copy of each document cited is enclosed.  
☐ Copies of the cited documents are not enclosed because

**Fees**

- ☐ This statement is filed before the later of (1) three months of (i) the filing of a national application or (ii) the entry date for the national stage of an international application or (2) the mailing date of a first office action on the merits. No fee is due.
- ☒ This statement is filed before the mailing date of a final office action, a notice of allowance or an action that otherwise closes prosecution, and
- ☒ The submission fee of \$180.00 under 37 CFR §1.17(p) is enclosed, or
- ☐ The following certification is made:
- ☐ each item of information contained in this statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement, or
- ☐ no item of information contained in this statement was cited in a communication from a foreign patent office in a counterpart foreign

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application and, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in this statement was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

- ☐ This statement is filed on or before payment of the issue fee, the submission fee of \$180.00 under 37 CFR §1.17(p) is enclosed, *and*
- ☐ each item of information contained in this statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement, or
- ☐ no item of information contained in this statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in this statement was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

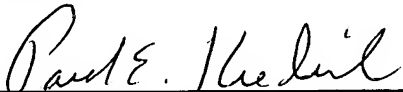
**Payment**

- ☒ A check in the amount of the submission fee is enclosed.
- ☐ Charge Account No. 02-3038 in the amount of the submission fee. A duplicate of this transmittal sheet is attached.

**Authorization to Charge Additional Fees**

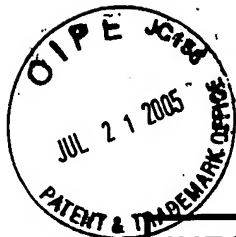
- ☒ The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §1.16 and §1.17 required by the attached paper and during the entire pendency of this application to Account No. 02-3038.

Respectfully submitted,



Date: 7/19/05

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KUDIRKA & JOBSE, LLP  
Customer Number 021127  
Tel: (617) 367-4600 Fax: (617) 367-4656

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT Sheet 1 of 2**

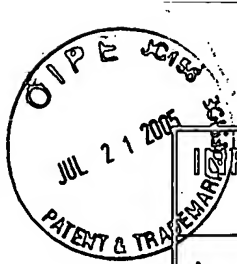
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**OTHER PRIOR ART – NON PATENT LITERATURE AND DOCUMENTS**

Exam Inits	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the articles (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
		KIYOTAKE, et al, "Magnetolectric Coupling in Terfenol-D/polyvinylidenedifluoride Composites", Applied Physics Letters, Volume 81, Number 1, July 1, 2002, 2002 American Institute of Physics, pages 100-101.	<input type="checkbox"/>
		GRIMES, et al., "Magnetoelastic Sensors For Remote Query Enviornmental Monitoring", Smart Mater. Struct. 8 (1999), 1999 IPO Publishing Ltd., Pages 639-646.	<input type="checkbox"/>
		RYU, et al., "Magnetolectric Properties in Piezoelectric and Magnetostrictive Laminate Composites", Japanese Journal of Physics, Vol. 40 (2001) Page 1, No. 8, August 2001, 2001 The Japanese Society of Applied Physics, Pages 4948-4951.	<input type="checkbox"/>
		WHITE, N.M., et al., "Design and Modelling of a Vibration-Powered Micro-Generator", Measurement + Control, Volume 34, November 2001, Pages 267-271.	<input type="checkbox"/>
		GLYNNE-JONES, P., et al., "The Modelling of a Piezoelectric Vibration Powered Generator for Microsystems", Transducer '01 - Eurosensors XV, The 11th International Conference on Solid-State Sensors and Actuators, Munich, Germany, June 10-14, 2001, pages 46 - 49.	<input type="checkbox"/>
		GLYNNE-JONES, P., et al., "Towards a Piezoelectric Vibration-Powered Microgenerator", IEE Proc.-Sci Meas. Technol., Vol. 148, No. 2, March 2001, pages 68-72.	<input type="checkbox"/>
		SHEARWOOD, C., et al., "Development of an Electromagnetic Microgenerator", Electronics Letters	<input type="checkbox"/>
		AMIRTHARAJA, R., et al., "Self-Powered Signal Processing Using Vibration-Based Power Generation", IEEE Journal of Solid State Circuits, v. 33, n. 5, pp. 687-695 (1998)	<input type="checkbox"/>

Examiner Signature		Date Considered	
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**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT Sheet 2 of 2**

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**OTHER PRIOR ART – NON PATENT LITERATURE AND DOCUMENTS**

Exam Inits	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the articles (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
		MENINGER, S., et al., "Vibration-to-Electric Energy Conversion", IEEE Transactions on VLSI Systems, v. 9, n. 1, p. 64 (2001)	<input type="checkbox"/>
		SHENCK, N.S., et al., "Energy Scavenging with Shoe-Mounted Piezoelectrics", IEEE Microelectronics, v. 21, n. 3, May-June 2001, p. 30-42	<input type="checkbox"/>
		GHANDI, K., "Compact Piezoelectric Based Power generation", Continuum Controls, Inc., DARPA Energy Harvesting Program Review, 2000	<input type="checkbox"/>
		WILLIAMS, C.B., et al., "Analysis of a Micro-Electric Generator For Microsystems," Transducer '95 - Eurosensors IX, The 8th International Conference on Solid-State Sensors and Actuators, and Eurosensors IX, Stockholm, Sweden, June 25-29, 1995, pages 369 - 372.	<input type="checkbox"/>
		CHURCHILL, D.L., et al., "Strain Energy Harvesting for Wireless Sensor Networks," Smart Structures and Materials 2003: Smart Electronics, MEMS, BioMEMS, and Nanotechnology, Proceedings of SPIE, Vol. 5055, (2003)	<input type="checkbox"/>
		EL-HANI, M., et al., "Design and Fabrication of a New Vibration-Based Electromechanical Power Generator", Sensors and Actuators, Elsevier Science B.V., 2001, pages 335-342.	<input type="checkbox"/>
		WHITE, N.M., et al., "A Novel Thick-Film Piezoelectric Micro-Generator", Smart Materials and Structures 10, 2001, page 850-852, Institute of Physics Publishing.	<input type="checkbox"/>
		JAMES, E.P., et al., "A Wireless Self-Powered Micro-System for Condition Monitoring", Department of Electronics and Computer Science, University of Southampton, Hampshire, England, 4 pages.	<input type="checkbox"/>
		JAMES, E.P., et al., "An Investigation of Self-Powered Systems for Condition Monitoring Applications", Sensors and Actuators, pages 171-176, Elsevier B. V.	<input type="checkbox"/>
		ROUNDY, Shad, et al., "A Study of Low Level Vibrations as a Power Source for Wireless Sensor Nodes", Computer Communications 26 (2003) pages 1131-1144, Elsevier Science B.V.	<input type="checkbox"/>
		GLYNNE-JONES, P., et al., "An Electromagnetic, Vibration-Powered Generator for Intelligent Sensor Systems", Sensors and Actuators, pages 344-349, Elsevier B.V.	<input type="checkbox"/>

Examiner  
Signature

Date  
Considered